

OLDEST BEE PAPER
IN AMERICA

THE AMERICAN
BEE JOURNAL

ESTABLISHED
IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

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THE WEEKLY EDITION

THE AMERICAN
BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.
Weekly, \$2 a year; Monthly, \$1.

PREMIUM.—Any one sending one new subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a postal card, for something must be wrong about it.

Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

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ADVERTISING RATES.

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ill.

The contents of this number being included in the general indexes to the volume, found on pages 675 to 678, we omit the usual index here.

THIS NUMBER will complete the volume of the Weekly BEE JOURNAL for 1883. We would respectfully request all our present subscribers to renew at once for 1884. By sending on the subscriptions at once, it will save us much extra labor in taking the names from our mail list, which is kept in type, and then replacing them again in a week or two. It will also prevent the loss of any copies of the JOURNAL, and be an advantage all around. If any find it inconvenient to send the \$2.00 now, send us a postal card requesting us to continue sending it along, and then the remittance may follow in a week or two afterwards.

Local Convention Directory.

1884. Time and place of Meeting.
 Jan. 6.—Nebraska State, at Lincoln, Neb. M. L. Trester, Sec.
 Jan. 8.—De Moines Co., at Middletown, Iowa.
 Jan. 8.—Cortland Union, at Cortland, N. Y. M. C. Bean, Sec., McGrawville, N. Y.
 Jan. 8-10.—Eastern New York, at Albany, N. Y. S. Vrooman, Pres.
 Jan. 9.—Central Illinois, at Bloomington, Ill. Jas. Poinexter, Sec.
 Jan. 10.—Champlain Valley, at Middleburg, Vt. J. E. Crane, Pres.
 Jan. 14, 15, 16.—Ohio State, at Columbus, O. C. M. Kingsbury, Sec.
 Jan. 15, 16.—Indiana State, at Indianapolis, Ind. F. L. Dougherty, Sec.
 Jan. 15, 16.—N. W. Ills., & S. W. Wis., at Freeport. J. Stewart, Sec., Rock City, Ill.
 Jan. 16, 17.—N. E. Ohio, and N. W. Pa., at Jefferson, O. C. H. Coon, Sec., New Lyme, Ohio.
 Jan. 22-24.—Northeastern, at Syracuse, N. Y. Geo. W. House, Sec., Fayetteville, N. Y.
 Jan. 23.—S. E. Mich., at Adrian, Mich. H. C. Markham, Sec.
 April 18.—Iowa Central, at Winterset, Iowa. J. E. Pryor, Sec.
 Oct. 11, 12.—Northern Mich., at Alma, Mich. F. A. Palmer, Sec., McBride, Mich.
 Dec. 10, 11.—Michigan State, at Lansing. H. D. Cutting, Sec., Clinton, Mich.
 In order to have this table complete. Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

CLUBBING LIST FOR 1884.

We will supply the American Bee Journal one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both. Club
The Weekly Bee Journal.....	\$2.00.
and Cook's Manual, 7th edition (in cloth) 3.25.	3.75
Cook's Manual, (in paper covers)..... 3.00.	3.50
Bees and Honey (T.G. Newman) cloth 2.75.	3.50
Bees and Honey (paper covers)..... 2.50.	3.25
Binder for Weekly Bee Journal..... 2.75.	3.50
Apiary Register for 200 colonies..... 4.00.	3.50
Dzierzon's New Bee Book (cloth)..... 4.00.	3.00
Dzierzon's New Book (paper covers) 3.50.	3.75
Quinby's New Bee-Keeping..... 3.50.	3.25
Langstroth's Standard Work..... 4.00.	3.75
Root's A B C of Bee Culture (cloth) 3.25.	3.00
Alley's Queen Rearing..... 3.00.	2.75
Scribner's Lumber and Log Book..... 3.25.	2.25
Fisher's Grain Tables..... 3.40.	2.25
Moore's Universal Assistant..... 4.00.	4.25
Honey as Food & Medicine, 100 Copies 6.00.	5.50
Blessed Bees..... 2.75.	2.50
King's Text Book..... 3.00.	2.75

The Weekly Bee Journal one year and Gleanings in Bee-Culture (A. J. Root) 3.00. 3.75
 Bee-Keepers' Magazine (A. J. King) 3.00. 3.75
 Bee-Keepers' Guide (A. G. Hill) 2.50. 3.25
 Kansas Bee-keeper..... 3.00. 3.25
 The Apiculturist, (Silas M. Locke) 3.00. 3.75
 New Eng. Apiarist, (W. W. Merrill) 3.25. 3.50
 British Bee Journal..... 3.75. 3.00
 The 8 above-named papers..... 9.00. 7.25

The Monthly Bee Journal and any of the above, \$1 less than the figures in the last column.

Speak a word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, for one *new* subscriber to the Weekly, or two for the Monthly, besides your own subscription to either edition, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

THE AMERICAN BEE JOURNAL.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory, and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

DADANT'S HONEY CROP!

Our crop being very large, we offer THIRTY THOUSAND POUNDS of extracted Honey

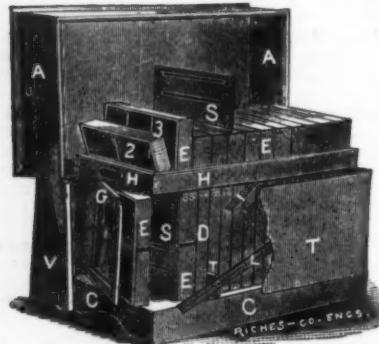
FOR SALE

at REASONABLE PRICES. We have both clover and fall honey. Samples sent on receipt of stamps to pay postage. The honey can be delivered in any shape to suit purchasers.

Send 15c. for our 24-page Pamphlet on Harvesting, Handling and Marketing extracted honey.

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1876. CROWN 1882.



The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free on application.

Address, ELVIN ARMSTRONG,
Prop'r. of the Crown Bee Hive Factory and Apary,
JERSEYVILLE, ILL.

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From JAMES HEDDON, July 27th, 1883.—Your Foundation is certainly the nicest and best handled of any I have seen on the market. It is the only foundation true to sample I have ever received.

From JAMES HEDDON, Aug. 10th, 1883.—I will contract for 2,000 pounds of foundation for next season on the terms of your letter.

From A. H. NEWMAN, Aug. 24th, 1883.—Book my order for 5,000 pounds for spring delivery.

From C. F. MUTH, Sept. 6th, 1883.—All of your shipments of foundation during the season were sold on the day of their arrival.

Dealers, send in your orders for next spring while wax is cheaper, and save trouble and money.

CHAS. DADANT & SON,
5ABLY HAMILTON, Hancock Co., ILL.

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FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

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BOOKS!

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225 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

Dzierzon's Rational Bee-Keeping.—A Translation of the Masterpiece of that much celebrated German authority, by H. Dieck and S. Stütter, and edited, with notes, by Charles S. Abbott, Ex-editor of the "British Bee Journal." Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon... has probably made greater strides in scientific apiculture than any one man... For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, 50c.

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years' experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. Price, \$1.00

Bee-keeper's Guide; or, Cook's Manual of the Apairy.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, \$1.25; paper cover, \$1.

Bees and Honey, or, Management of an Apairy for Pleasure and Profit, by Thomas G. Newman—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, 75c.; in paper covers, 50c., postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bee and Honey, the nature, quality, sources, and preparation of Honey for the Market. Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc.; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in English and German. Price for either edition, 5c.; per dozen, 50c.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey and instructions on the exhibition of bees and honey at Fairs, etc. by T. G. Newman. This is a chapter from "Bees and Honey." Price, 10c.

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, 5c.

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, 10c.

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, 5c.

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying substances offered as food. 200 pages 50c.

Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubic content of square and round timber, staves and heading, bolt tables, wages, rent, board, capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price 85c. postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measure, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. 40 cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronziers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, \$8.50.

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information. Price 25c. for either the English or German editions.

Quinby's New Bee-Keeping, by L. C. Root.—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—\$1.50.

The Hive I Use.—Being a description of the hive used by G. M. Doolittle. Price, 5c.

Novice's ABC of Bee-Culture, by A. L. Root.—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25.

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00.

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, 52.

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, 75c.

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, 25c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. 15c.

Practical Hints to Bee-Keepers, by Chas. F. Muth: 32 pages. It gives Mr. Muth's views on the management of bees. Price, 10c.

Dzierzon Theory—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. 15c.

Apairy Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, \$1.00; for 100 colonies, \$1.50; for 200 colonies, \$2.00.

Deutsche Buecher, ueber Bienenzucht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieses Pamphlet enthält Belehrungen über folgende Gegenstände—Dertlichkeit des Bienenstandes—Honig pflanzen—Erziehung der Königin—Füttern—Schwärmen—Ableger—Versehen—Italienische Bienen—Bücher von Königinen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueste Methode für die Herrichtung des Honigs für den Handel beschrieben ist. Preis 40 Gents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieses enthält eine klare Darstellung über Bienen und Honig des Alterthums; die Beschaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formkuchen, Puddings, Schaumkonfekt, Weine, u. s. w. zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es ist für den Consumenten bestimmt, und sollte vielseitig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und seine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetisch geordnetes Verzeichniß der verschiedenen Pferdekrankheiten, sammt den Arzachen, Symptomen und der richtigen Behandlung derselben; ferner, eine Sammlung wertvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN,
225 West Madison St., CHICAGO, ILL.

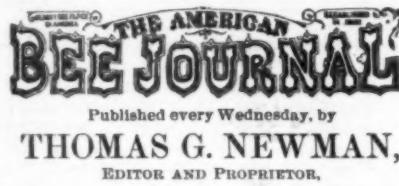
Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XIX.

CHICAGO, ILL., DECEMBER 26, 1883.

No. 52.



We point with pride to the copious Indexes contained in this paper. They will be of untold value to those who bind the JOURNAL, or those who use Emerson Binders in which to keep the volume.

"Fifty-two dividends a year from \$2 invested." That is what every one will receive who subscribes for the Weekly BEE JOURNAL.

The Rev. S. L. Stiver, of Bunker Hill, Ills., asks: "Will pure honey granulate? and if so, is it as nutritious and wholesome as the ungranulated?" Yes; nearly all pure honey will granulate on the approach of cold weather or before, and is not only as nutritious, but it is preferred by many for table use and medicinal purposes.

As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the BEE JOURNAL, on the first page of this paper.

We have received the Catalogue and Price List of Mr. Elvin Armstrong, Jerseyville, Ill., for 1884. The Crown bee hive and supplies generally.

We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

For \$2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or in cloth for \$3.00.

The Volume for 1883 is Finished.

With this number of the Weekly BEE JOURNAL, the volume for 1883 is complete! The work on it is done—the volume closed—the year ended—another "star" added to the galaxy of the bright luminaries of its existence!

The success of the Weekly BEE JOURNAL during the past years of its existence, has far exceeded the expectations of its publisher, and shows that the time had fully come when its existence was a public necessity. Who among progressive apiarists would now consent for a moment to go back again to a monthly? Echo asks, *Who?* and the echo reverberates the only reply.

It is a source of much congratulation to its friends, as well as its publisher, that it enjoys a reputation for reliability and integrity, of which but few of the publications of the world can boast.

We are quite willing to submit to the verdict of its ten thousand readers, as to how well it has sustained the promises made a year ago, that it would "continue to lead in all the qualities of our ever-advancing art, and maintain its high position as the most enterprising Bee Paper of the World." The thousands who have already volunteered their appreciation during the year, and testified of its practical value by their continued patronage, and those who now are showing their esteem by promptly renewing their subscriptions for the coming year (and with these substantial approvals send words of encouragement); all stimulate us to further diligence in the prosecution of our life work. Its record, character, power and usefulness in the past, is its guarantee for the future.

We have already engaged an army of regular correspondents of the BEE JOURNAL for the year 1884, comprising the best apicultural writers of the present age, and many of the

most practical and successful apiarists of the world.

As heretofore, the BEE JOURNAL will continue to be the medium for the promulgation of the best thoughts of the most advanced bee-keepers of the age—keeping abreast of the highest progress, favoring the freest discussion of all points of interest in apiculture, advancing progressive ideas and the newest practical conceptions and improvements.

Amid all the rush of correspondence at this season of the year, we will pause a moment to wish all our readers

A MERRY CHRISTMAS,
AND
A HAPPY NEW YEAR!

Honey Crop of France and America.

Mr. Jas. McKnight, of Capistrano, Cal., writes us as follows:

A friend of mine, Mr. Louis Dartigues, of this place, asked me to guess how many colonies of bees there were in France. Of course I could not do so. Judge of my astonishment when he handed me the enclosed strip taken from a French paper:

Colonies, 1,971,365; honey, 9,948,642 kilos.; wax, 2,845,749 kilos.; value of honey, 14,945,835 francs; value of wax, 8,752,299 francs; total, 23,698,134 francs.

Translated to our figures it is about as follows: Colonies, 1,971,365; honey, 21,887,000 lbs.; wax, 6,260,600 lbs.; value of honey, \$2,989,167; value of wax, \$1,750,460; total value, \$4,749,627.

As we sometimes hear that the United States is the largest honey-producing country in the world, I would like to know what the figures of the last census gives, or how does it compare with the above?

The last census reports have not yet been published, but it is estimated that there are in the United States and the Dominion of Canada, about six millions of colonies of bees, and the honey crop is valued at about thirty millions of dollars. The wax product is valued at about two millions of dollars. Modern management produces less wax than with the old style of destroying the bees for the honey and wax.



For the American Bee Journal.

Michigan State Convention.

W. Z. HUTCHINSON.

SECOND DAY.

The meeting was called to order at 9 a. m. by President Cook, and then the Convention proceeded to discuss the "Selling of Honey."

C. F. Muth said that he had induced many manufacturers of tobacco, of cakes and cookies, of pickles, as well as packers of pork, to use honey in place of other sweets. If we keep our honey pure, there will be no trouble in disposing of it. He exhibited some excellent cookies or buns, in the manufacture of which, honey was used.

A. D. Benham: A confectioner in our town took my entire crop of 1,000 pounds of extracted honey to use in making cookies. He also had samples which were very much like those brought by Mr. Muth.

B. Salisbury spoke of the benefits of honey in pulmonary diseases.

Rev. L. L. Langstroth had a dear friend that was apparently near death's door from consumption, who was restored to health by small but frequent doses of honey. He considered basswood honey the best for lung diseases.

"Is Bee-Keeping Healthful?" was next discussed.

Dr. Mason said, no; bee-keeping is not healthful. My hands, at times hang almost helpless from the effects of bee poison. Almost every fall I am nearly disabled from the effects of the poison. If I keep away from the bees I am all right.

C. F. Muth: Get better-natured bees.

Dr. Mason: My bees are as good-natured as most bees, but bees delight in stinging me. While at Mr. Muth's apiary I was stung three times, but Mr. Muth knew nothing about it.

Rev. L. L. Langstroth: When I commenced bee-keeping, a sting caused much swelling, but in time this trouble passed away. Several years passed, during which I handled no bees, and when I again attempted it, I found myself more susceptible to the poison than ever, but by continuing to work with the bees, disregarding the stings, my former indifference returned.

D. A. Jones: When a hive is opened every frame should be moved along a little, and the whole hive disturbed before the first frame is lifted out, this disorganizes the whole of the bees, and starts them to eating honey, and the danger from stings is lessened.

M. H. Hunt: Honey is an excellent remedy, and is always handy.

Mr. Sheldon: Bee stings have cured rheumatism for me.

Dr. Mason: Bee stings never helped my rheumatism.

D. A. Jones: I have cured rheumatism and neuralgia, for the time being,

with bee stings, but the next day it returned. By singeing the hairs from the back of the hand and wrist, many stings will be prevented. The bees catch their feet in the hairs, if left on, become irritated and sting.

Dr. Rulison: Chloroform is an excellent remedy for stings.

Mr. Millard: I am afflicted with eruptions and boils, caused by bee poison.

Your humble servant (W. Z. H.) had in his mind the case of Mr. James Heddon, who suffers so much from the effect of bee poison as to be almost entirely prevented from handling bees, but, as many others wanted to talk, he said nothing.

"Exhibitions at the State Fair," was then discussed. Secretary Cutting gave a detailed report of his meeting the officers of the State Agricultural Society, inducing them to increase the premium list and put up a building expressly for the apriarian department. He then read the following upon the importance of making exhibits at Fairs:

Exhibitions properly conducted are educational institutions. I think it is conceded that to create a demand for anything is to bring it before the public in some form where the masses can be educated to its uses, and I know of no place where anything can be brought before the public, and its uses explained, as well as at State and County Fairs.

Where can you place honey to reach the eye of the consumer as well as at large exhibitions? Honey placed on exhibition at fairs, is seen by thousands every day; and when put up attractively, to please the eye, it creates a demand.

How often the exhibitor hears this remark: "I did not think of buying honey when I came here, but it looks so nice that I must take some home." If you put honey in a box, and put up notices all around, saying that you have honey for sale, and I dare say you will not sell a box a day; while the exhibitor opposite, who has a large exhibit, put up in an attractive manner, will sell large quantities every day.

You must be ready to explain away all existing prejudice, for you will find such every hour in the day, that seems foolish to you, because you have been educated to know better. I well remember one little incident that happened at our last State Fair. A party of ladies came along, when one asked the question: "What is that machine for?" and the answer was, to make comb foundation for the bees to work on—at the same time showing them a fine specimen. The lady turned to the party she was with, and exclaimed: "There, didn't I tell you that honey was adulterated, for here is the very machine to make the comb, and there is the machine to fill it" (referring to an extractor). It took no small amount of talk to break down the prejudice.

To the supply dealer exhibitions are a fine thing. Bee-keepers know that there will be placed on exhibition a large collection of implements and supplies of all kinds, and they go to

the fair to see what is new and what they can learn, and if you have a good line of supplies you will get many an order that you would not have in any other way.

Men get different ideas from what they read and what they see. You may describe an article, and the party you wish to reach does not get your idea of it, but the moment he "sees the article" it is different; he does not hesitate to buy it. You must bring your goods before the consumer if you expect to dispose of them.

Another important feature that is left out at our exhibitions, is lady bee-keepers. A few lady bee-keepers would help exhibitions greatly. They can arrange an exhibit much more tastefully than men, and the lady visitors will stop and talk with lady exhibitors much sooner than with men. Any woman can exert a great moral influence and render our exhibitions much more attractive.

I would earnestly appeal to every bee-keeper to come out next fall at our State Fair and make a grand exhibition. Do not hold back because you have not much to show; every one helps. Last year one man came with a single bee hive and received the first premium.

The Agricultural Society does not want to see one man fill the building, but it wants all to come. A building will be provided large enough to accommodate all. In no other way can you make the sale of honey so great as to make a fine exhibit at fairs all over the land. So I will say again: "Come one and all; bring what you can, and let us show our Mother Country that we, too, can have a great bee and honey show."

A. J. Cook: When I went to the State Fair, the President did not wait for me to come through the yard, but came out to meet me, and said that he was proud of the exhibit in the apriarian department.

D. A. Jones said that honey-shows increased its sale wonderfully. Two thousand two-ounce packages of honey were sold at 5 cents each, at our fair. These packages gave people a taste, inducing them to buy larger packages. One dealer bought them to give as Christmas advertisement. Honey-producers should not neglect this great educator of the people.

M. H. Hunt: I sold all my honey at the fair. Mr. Hutchinson sold some, and might have sold all of it if he had not held it above market price.

S. T. Pettit: Candied honey should be exhibited at fairs. Most bee-keepers exhibit their honey in the liquid form; purchasers carry it home in that form, and when it crystallizes they think something must be wrong, and fear that it is adulterated.

To revise the State Fair premium list, and urge its adoption by the officers of the Agricultural Society, the following were appointed as a committee: H. D. Cutting, D. A. Jones, Dr. Mason, Dr. Kazartee and C. F. Muth.

The President's address was then read by Prof. Cook, and was enthusiastically received. It was as follows:

THE OUTLOOK OF APICULTURE.

Brothers of the apiary, ladies and gentlemen:—

The Constitution of our Association makes it incumbent upon me to present the annual address by virtue of my office as President of the Society. In casting about for a theme suitable to this occasion, I can find nothing I deem more worthy than "The Outlook of Apiculture."

Before commencing a survey of the present status of our art, I pause for a moment to speak of an event which is of deepest interest to us all. Need I say I refer to the presence among us of our honored and revered friend and benefactor, whose invention alone made possible the mighty progress of our art; whose rare gift as an experimentalist, scholarly attainments and surpassing gift as a writer, gave to us the greatest work ever written on apiculture; whose grand character, transparent ingenuousness, child-like-simplicity, and retiring modesty, teach us so graphically what the Christ spirit can do for man; whose great heart ever moved by the broadest charity, made him to bless, even those whose curses he bitterly felt. To know such an one, to look upon him, to grasp his hand, to hear his words of wisdom, bringing to us the treasures of a mind stored with the richest truths, and of a heart, too great to feel malice; and so large that it reaches out to aid even the least of us, all of this is an experience which we Michigan bee-keepers appreciate to-day. How greatly we are honored, we cannot now find words to express; but in all our future we shall remember this event, as realizing to us, a hope which we had never expected to see fulfilled.

A few years ago the cynics of our brotherhood told us that conventions were the enemies of our art, that they were worse than useless, and that to stimulate the growth of apiculture was to use the suicide's dagger. Now it is rare indeed to find a man so narrow as to declaim against association. While time has shown that with bee-keeping, as with every other business, increased supply brings a much greater increase in demand, which is further made potential for good, by bringing the increased energy and intelligence which numbers are sure to give. The business that booms, is the one that has among its patrons the talent, the tact, the energy and the genius of the country. Without conventions, we could not have inaugurated, and made successful our splendid exhibitions, which are sure to foster our art as few other things can. Those States whose conventions are ablest, and most frequent, are ahead. It is always so, with every art and at all times. County and District societies should send delegates to the State association, and the State to the Inter-State and National. Thus concerted action will be made possible; thus the thought and methods of the most progressive will become the property of the many. To be sure, we have our excellent periodicals, but they are only possible, as association inspites bee-keeping; and, good as it seems and is to get the thoughts and methods of

our able apiarists through the press, it is not like personal intercourse, and word of mouth. Conventions are a powerful educator. No single bee-keeper becomes abler and better prepared to do his work well, without benefiting the whole fraternity.

We increase our art, only as success shows it worthy. I may praise our business with a voice that would do honor to an auctioneer, yet that will influence little unless my neighbors see evidence that the almighty dollar puts in an appearance. Those who are energetic, willing to work, intelligent and willing and eager to learn, observing, persevering and attentive to their work, will rarely ever fail in apiculture. Those who lack these qualities will be left behind before they get far enough to meet great loss; so little mischief is wrought even if some are induced to adopt this business, and because they lack the elements of success, fail. Usually they gain enough added intelligence to more than pay for the time and capital expended.

Another falacy, as I think, which some few of our apiarists are loudly proclaiming, is that apiculture is only for the specialist. Why, gentlemen, our brothers in horticulture and agriculture are free to admit that they owe more, in the way of real progress and advancement to amateurs than to specialists. I know that apiculture is no exception. Our honored guest was an amateur when he conferred the greatest boon upon our art. Long. Demaree, Clute, and a host of others of our best bee-keepers, are amateurs. I am free to say that three-fourths of the honey product of our State is produced by men with whom apiculture is only an avocation. I can name a score of bee-keepers, whom I know personally, who are farmers, lawyers, doctors, who keep hundreds of colonies of bees, and many of whom, not only get large returns of honey, but winter each and every year with entire success. When our specialists are all equally successful, then they may cry hold! enough! with more justice.

An indication that the new recruits in apiculture will exalt rather than degrade the business, is seen in the fact that many are calling for instruction in this line. Few studies at our Agricultural College win more earnest study and real enthusiasm than does entomology, which embraces quite thorough instruction in apiculture. Last year we had a student from England, and this year one from Texas, who came especially for the bee-culture. The fact that Messrs. Jones, Heddon and Clute have respectable classes, shows that there is a call for more knowledge. We can but wish God-speed to all of these gentlemen in their efforts. Special training is most desirable to the would-be apiarist. To be with such efficient bee-keepers for a season will give a vantage ground that can hardly be appreciated till enjoyed. The practical apiarist will be more proficient if he has had the science of entomology and physiology, and other cognate studies, but if he cannot because of age or circumstance take so much time, let him by all means study and work for a season

with some good apiarist. Such a course will never be regretted.

The past season has shown that we can procure nearly as much honey in small as larger sections. It would also seem that with the proper arrangement and care, we have no need of separators. That there will ever be call for sections smaller than $4\frac{1}{4}$ inches square, sufficient to warrant their adoption, at the added expense in time and money which they demand, I much doubt. I secured quite an amount of honey the past season in the small sections—half-pound sections—but I found those who bought it, thought these smaller sections in no wise preferable to the common one-pound section. It is reported that Mr. Heddon is going to adopt the smaller size exclusively another season. It may pay him to do so; but for the most of us, I think, we shall be wise to adhere to the one and two-pound sections.

Another question in which we all take a deep interest, is the "New Bees." I have had no experience with the Cyprian bees, but I think more and more of the Syrian. I find no trouble to handle them, and take my large class of students, new to the business, right into the apiary. These 30 or 40 students daily manipulate the bees, doing everything that the bee-keeper ever needs to do, and rarely ever get stung. I find that the comb honey of the Syrians is excellent, that the bees go readily into the sections. We did not get all our sections so that they could be crated without the use of the separators; but I am not sure but that it was more our fault than the fault of the bees. They are very prolific, breeding even when there is no nectar to gather, and they often gather when other bees are idle. I have this fall secured from Mr. Frank Benton, a Carniolan queen, and shall try crossing the Carniolans with the Syrians. Perhaps we can thus secure a strain with the amiability of the Carniolan, and the business of the Syrians.

Our exhibition the past autumn, thanks to our able secretary, Messrs. Hutchinson, Hunt and others, was very fine, and reflected great credit on our Association and our State. These shows can but do immense good. They show what bee-keeping is, and develop a market as nothing else can. I suggest that we reappoint our committee, and that we ask for still larger premiums, a separate hall in a convenient and accessible location, and that honey in small packages be sold, all through the fair. A neat little pail of honey or comb section thus sold on the fair ground, will influence the market all over the State.

"Pasturage for Bees" is another subject that may well receive our attention. Though it may not be a demonstrated fact, there can be hardly any question but it will pay to plant for bees. Every bee-keeper should scatter motherwort, catnip, figwort, spiderwort, sweet clover, and Rocky Mountain bee plant seed in all the waste places about the apiary. These are harmless plants to the farmer, and, as their presence adds to the

wealth of the country, he is a benefactor who causes their introduction and spread. They are more beautiful than May-weed, nettles, or smartweed, and may well supersede these cumberers of the ground. It is well worth while, too, for our bee-keepers to stimulate the growth of alsike clover. Let us sow it ourselves, and furnish it to our neighbors that they may plant it. Let our bee-keepers see that the ladies have abundance of mignonette in the garden; and ever bear in mind that raspberries gives us a most luscious fruit, which costs very little, and more—furnishes the bees with nectar that equals that of the clovers and basswood, when converted into honey. To be sure, the raspberry, white and alsike clover, and the tulip, comes at about the same time. Yet, who has not noticed that after the clovers will utterly fail to attract the bees, then the raspberry blossoms will be ringing with the joyous hum of our pets of the hive. Plants, like insects, are very susceptible to changes in the weather, and vary in the degree, which the weather effects to modify their functional activity. So success will often vary exceedingly with the greater or less number of honey plants, even though all are in bloom at the same time. In this connection, we all should observe the plants in reference to the soil on which they grow. I have found that while Rocky Mountain bee plant and mignonette do well on light sandy soil, figwort and spider plant do very poorly. It is well to note the natural soil of the plant, and if we wish to change its habit, do it gradually, that the transition be not too violent. Figwort grows naturally on rich, heavy, moist soils. To change it at once to lightest land, is a very abrupt transition.

There are few topics, at present, in which we Michigan bee-keepers are more interested than in that of "foul brood." Probably there is no State in the country in which this fell malady has gained so large a foot-hold. I have received specimens from Lenawee, Jackson, Livingston, Wayne, Washtenaw, and Montcalm counties. Surely, it behooves us all to become thoroughly conversant with this terrible plague, that we may be ready to grapple with it at its first appearance, should it come among us. The fact that it has jumped the past season from the south to the north part of the State, shows that we are all in danger. As Mr. Muth, who is the advocate of salicylic acid as a cure, and Mr. Jones, who has faith in, and practices the starvation method of treatment, are to be with us, I will only venture the remark that very likely the rank and file can do no better than to keep a very close watch, and at the very first appearance, practice the extermination method. Experts may cure. The novice will possibly save money and patience if he stamps it out, at the outset, by cremation or burial.

Michigan now has probably the most active and influential State organization in the country. I think she has the greatest number of local organizations (she now has seven) of any

State. We need not wonder then that the editor of one of our largest and most influential bee papers, one of the very best, in fact, in the world, states that he has more subscribers in Michigan than in any other State. Possibly we now have enough local organizations, though it would seem that there might be room for another West of Battle Creek, on the Central. There are now three along the Central railroad, two on a line with Lansing, and two on the D. & G. H. railroad. Besides the one in the southwest, yet to be, there will soon be need of one still further north.

It is certainly for our good, and the general good of our craft, to keep these associations alive and vigorous. As a preventive of "foul brood," I would rather have a wide-awake local society, than all the other methods. It would give the knowledge to diagnose the evil, and would make known all the remedies, and would give the wise discretion in a choice and application of them. Let us see to it that these associations are well sustained, and are kept in close relation with this our State society.

It is a little late to speak of wintering, yet it is always an interesting theme to the apiarist. I will only say that I believe that he who cared well for his bees last autumn, gave them sufficient stores, and has them in a proper cellar, has little to fear. Sugar may be better for winter—surely is better than some honey. That it is better than most honey, I do not believe. Pollen may not, usually will not do any harm. Yet I do not hesitate to say that it is safer to have it omitted in provisioning our bees for winter. This conclusion I came to after a trial of several years. I could theorize as to the cause, but consider the fact more important.

I hope and trust that this will be one of the most interesting and valuable meetings we have ever held. I hope that in our selection of a place for our next meeting, we will go where we are wanted, that proper pains may be taken to thoroughly advertise our meeting, secure a hall, and arrange all the necessary local details.

A. J. COOK.

The election of officers resulted as follows: President, W. Z. Hutchinson; Vice-Presidents, R. L. Taylor, James Heddon and B. Salisbury; Secretary, H. D. Cutting; Treasurer, T. M. Cobb.

Mr. Langstroth then remarked that he had been so kindly received that he felt some embarrassment in speaking. He had made nothing by his invention, but he would rather have the good will of his fellow-men than to be the possessor of untold thousands, made at the expense of others. He spoke of his passionate love for insects in his boyhood, giving many amusing illustrations. He had brought flies back to life that were apparently dead from drowning; had attempted to start ant hills; and was punished for wearing out the knees of his pants in examining ant hills, etc. The reading of Virgil only made him the more cautious, and led him to examine things for himself. Had he possessed

books, it might have been the worse for him, as he might not have investigated so closely. He then gave a history of the invention of the movable frame hive, spoke of the honored dead, of his sickness, etc.

At the close of Mr. Langstroth's address, the building fairly rang with applause.

The following was then passed: *Resolved*, That the editors of the several bee periodicals, and writers on apicultural subjects, be requested to use the word Langstroth in reference to this hive of every style of frame; to say, for instance, "The Simplicity Langstroth," and not the Langstroth.

"Honey-Producing Plants" were discussed, and the outlook was quite favorable.

Dr. Mason: Sweet clover is my favorite honey-plant. There are acres and acres of it in Toledo, even in the busy streets, and one who has never seen it, has but little idea how luxuriantly it grows. The wagon wheels run against it, and scatter the seed. A neighbor of mine obtained 1,000 pounds of surplus honey from sweet clover, and it was gathered quite late in the season.

T. F. Bingham: Sweet clover may be very fragrant when in bloom, but it is no ornament to the streets of a city. Look, for instance, at the streets of Chicago.

Prof. Cook: It is not an ornament in the fall, but neither are other noxious weeds that furnish no honey; if we must have weeds, let them furnish honey.

The question was asked—"Do queens mate more than once?"

Dr. L. C. Whiting: I have watched queens and seen them fly and return with the evidence of having met the drone, and in a few minutes fly and mate again. I had one queen that flew and mated five times before commencing to lay.

Rev. L. L. Langstroth: I, too, have seen the same thing, but have always thought that such queens were not really and fully fertilized until the last time they flew.

The next subject was "Wintering."

Mr. Gillett: I think that early preparations for winter is important. I lose the most bees among those that are packed late in the season.

A. Keoppen: My hives are double-walled, and filled with tow. The bottom-board is made in the same manner.

R. L. Taylor: I have wintered my bees successfully two winters, in the cellar. They occupy a separate apartment, and a furnace gives an abundance of ventilation. The temperature is kept at about 40°. Those heavily packed out-of-doors, suffer from dampness. Strong colonies are more apt to breed, and thus bring on dysentery.

Prof. Cook winters bees successfully in a cellar where the water often stands 8 inches deep.

Mr. Benham: I prefer cellar wintering; but taking them out too early in the spring is detrimental.

T. C. Pollock: I prefer cellar wintering. I leave the cellar open until apples freeze near the door, then

close it up. If the outside temperature rises, it will not much affect the cellar if it is kept closed.

Mr. Emigh: I winter my bees in the cellar, and my losses are slight. In the spring I set out one colony, and when that begins to bring in pollen, I put out the rest. My cellar is ventilated by a pipe connected with the stove-pipe.

D. A. Jones: As near as I can recollect, the consumption of honey, per colony, in my cellar, is about 6 pounds. Out of doors it requires 10 pounds more. Carrying bees out for a flight, always brings on dysentery. My bees, confined six months, came out all right. When bees are found clustered tightly, all is well.

Dr. Mason: I agree with Mr. Jones that, when bees are clustered tightly, they are all right. I have wintered bees successfully in different kinds of cellars, and I do not care whether the cellars are wet or dry. Bees that die in the cellar do not have the right kind of food; and the less of any food they consume the better.

Mr. Muth: I want my bees to have from 20 to 30 pounds of honey for winter, and I care not for pollen. I do not think it causes dysentery.

Mr. Jones: The mice pulled the covers from some of the colonies, in one of my bee houses, and those colonies wintered the best.

Prof. Cook: My experience has been the opposite.

Rev. L. L. Langstroth: Moving the combs apart is a great help in wintering. A warm covering, something like a woolen blanket, is a good protection.

Adjourned till 1:30 p. m.

AFTERNOON SESSION.

The Convention was called at 1:30 p. m. President Hutchinson in the Chair. The first topic brought up was: "Comb Foundation." The discussion was preceded by an exhibition of the Given press, and the manufacture of foundation. The sheets of wax had become so warm that several had stuck together, and in making up full sheets, several pieces were put together.

Mr. Taylor: I use Babbitt's concentrated lye to keep the wax from sticking to the dies. Wax works best in a temperature of from 70° to 80°. Lye is not disagreeable to bees, as they often come out and sip it up while I am at work.

Prof. Cook: The foundation made here last spring by Mr. Taylor, was certainly very fine, but as some prefer the Van Deusen foundation, and as Mr. Van Deusen is here, we would like to hear from him.

Mr. Van Deusen exhibited a large sheet of foundation. He said that many objected to it on account of its hardness, but such should remember that the heat of the hives soon softens the wax. Others objected to the flat bottoms, but he thought this no more objectionable than the round cell of the Dunham.

Prof. Cook: The Pelham will need mention, especially as it is cheap.

C. F. Muth: I have tried the flat-bottomed and that made by Chas. Dadant, and I see no difference.

Question—"What kind of bees are the most gentle?"

D. A. Jones: Italians are the most gentle; but Syrians crossed with Italians are the best honey-gatherers. There is a difference in the Syrians—from some localities they are gentle, from others they are not. Those from Mt. Lebanon are the best. I prefer to mate Syrian queens with Italian drones.

On "Finding Black Queens," D. A. Jones said: Shake all the bees from the combs into the hive, and set the combs to one side, shake the bees to one side of the hive, and as they start to spread out, and set up their buzzing, the queen will come to the top and start out with those long strides of hers, and she can easily be found.

The question was asked: "Is it true that bees can be wintered on from 6 to 10 lbs. of honey per colony?"

D. A. Jones: Yes, it is true, but they will consume large quantities after being placed upon their summer stands.

Prof. Cook: We have wintered a colony upon 3 pounds.

On motion of H. D. Cutting, W. J. Baxter, of Janesville, was made an honorary member.

Question—"Shall we influence people to become bee-keepers?" Some said yes; others, no. D. A. Jones gave several reasons in the affirmative. Said that we could not produce as much honey as we could sell.

Prof. Cook agreed with Mr. Jones.

On the "Prevention of Bee Stings," D. A. Jones said: I have found that a person wearing black clothes is more liable to be stung. "Fuzzy" clothing is the kind to wear if you want to be stung. Something smooth like duck, is the best to avoid stings. The first thing a student is told to do, is to singe the hair from his hands and wrists. If you wear a veil you must wear it constantly. If one operator wears a veil, and another in the same yard does not, the one without a veil will receive more stings than he would if the other did not wear one. A straw hat with a wide slouching rim is the best with which to avoid stings.

Adjourned till 7:30 p. m.

EVENING SESSION.

The meeting was called to order at 7:30 p. m., by President Hutchinson, who remarked that Dr. Mason had a comb on exhibition, one-fifth of which was paraffine, and he knew that the Doctor would like to talk about it.

Dr. Mason: I do not know that there is much to say. I tried mixing paraffine with wax, and making the mixture into foundation. Alternate frames were filled with this kind of foundation, and the other frames with pure wax foundation. The bees drew them out and used them just alike. I could see no difference. Myself and neighbors have used such foundation for two years. Paraffine can be obtained whose melting point is about like wax. The time is coming when something must be substituted for wax. I would use it for comb honey if certain that it was a fine article.

D. A. Jones: To detect paraffine or tallow in wax, keep pure wax and the suspected wax at the same tempera-

ture, gradually raising the temperature, and that containing the other substances will melt first. I have tried paraffine, but could obtain no satisfactory results.

J. Van Deusen: I have looked for a substitute for wax. Thought celluloid might answer, but found that it cost \$2 per pound. I found paraffine that would stand a test of 140°, but even that would not answer.

Dr. Mason: I have had paraffine that it became necessary to break into small pieces in order to have it melt as soon as wax.

J. Van Deusen: I presume it would be possible to obtain paraffine whose melting point would be high enough to answer when wires are used.

Dr. Whiting: I have used foundation containing paraffine, and it gave me much trouble. The wax made from such combs might cause the purchaser of it some trouble.

S. T. Pettit: We must soon have a substitute for wax, why discourage trying such things?

D. A. Jones: I have tried almost everything; muslin covered with wax was a failure. An expensive quality of linen paper covered with wax has been a success to a certain extent. Figures, writing, or drawing can be made upon the paper before coating it with wax, and they will show after the comb is drawn and finished. The trouble came in when the bees attempted to thin the septum.

R. L. Taylor had tried mixing resin with the wax, but it was a brilliant failure. The bees neglected it for a long time, and then built drone comb over it.

The report of the committee on resolutions was passed unanimously. It gave thanks to Rev. L. L. Langstroth and visitors from other States; to the proprietors of the hall; the railroads for reduced fares; the local papers for notices, etc.

The Convention adjourned to meet at Lansing upon the second Wednesday after the first Tuesday in December, 1884.

For the American Bee Journal.

Straight Worker Combs without Using Comb Foundation.

G. M. DOOLITTLE.

To have all our combs built true in the frames, so that each comb is as true as a board, is certainly worth working for, to those who handle their frames. If frames are not to be handled, then a box hive is as good as one with frames in it, for all practical purposes. The object of frame hives is to allow of a better control over the inside of the hive than could be done with box hives, and only as these frames are movable, in the fullest sense of the word, is this object secured. We often see combs so bulged or crooked in the frames, that they will not allow of their being exchanged to different parts of the hive, or from one hive to another; in which case the hive containing them can scarcely be called a movable comb hive.

To tell those wishing to know how worker combs can be secured, built

straight and true within the frames without the aid of comb foundation, is the object of this article. I expect many will think it "mistaken economy" to try to get combs without using foundation, but many cannot afford to buy it, and a few, myself among that number, believe that combs can be built as cheaply as the foundation can be purchased and gotten into combs. In a future article I propose to discuss this matter regarding the economy of comb foundation, therefore I will say nothing further on the subject here.

As a starting point toward straight combs, I use a wax guide on the under side of the top-bar of the frame, which is secured by making a straight edge of hard wood, 7-16 thick by 1 inch wide, and $\frac{1}{4}$ inch shorter than the inside of the top-bar of the frame. This straight-edge is nailed to a wide board, and the board so fixed that it inclines enough for the melted wax, (which is to be used to make the guide) to run along the top-bar freely. With a wet sponge, moisten the straight-edge, lay the frame on the wide board with the underside of the top-bar pressed against the straight-edge, when a little wax is turned from a spoon into the upper end of the V shaped trough (which is made by the top-bar of the frame and the straight-edge,) and allowed to run down the whole length of it. Now lift the frame and you have a nice wax guide for the bees to start their comb on. By keeping the straight-edge wet, the wax will not stick to it, and by using a lamp under the dish of wax, it can be so regulated that the wax is kept at the right temperature all the while. In this way guides can be put on very rapidly.

While I have found a guide of some kind an absolute necessity (the above being the best,) I have also found that no guide can always be depended upon, for bees are sometimes very obstinate, and will leave the guide so as to build crooked combs if they do not go directly across the frames. Consequently, it pays the apiarist to look at each colony hived on empty frames while they are building comb, as often as once in 3 days. If any combs are found going wrong, they can be bent back in line very easily, and after the hive is once filled, they are good for a long time, as I never saw one that I would discard on account of age.

The readers of the BEE JOURNAL are aware that I prefer natural swarms, and to best illustrate how I secure combs such as I desire, I will give my management of a swarm. As all my queens have their wings clipped, the swarm is hived by letting them return, previously moving the old colony to a new location and setting the new hive, containing the full number (9) of frames, in its place. In two days I open the hive, and usually find that the bees have made a start in 5 frames. These 5 frames are placed together at one side of the hive, and a division board is placed next to them. This throws the full force on these frames, and they will soon fill them with straight worker comb as a rule, especially if a few sections are placed

over them (as there always should be), so that if any drone comb is built, it can be done in the sections. This also gets the bees at work in the sections quicker than any way I know of. If you get these 5 combs built straight, you will have no trouble in getting the rest so, as they can build them no other way, if placed between two of those already built. If every comb is straight and all worker, such a colony will be a profitable one, and if each colony has such combs, all will be profitable.

No apiarist if he has not more than 3 or 4 colonies, should consider them in proper working order until each comb is a straight worker comb. There is no need of having hives half full of drone comb, and so crooked that they cannot be handled. If we do things at the right time and in a proper manner, our bees will more than pay us for all time spent on them.

Suppose that, instead of working as above, we hive swarms without paying any further attention to them. Swarms issuing when honey is very abundant, will build comb very rapidly, filling their hive in 8 or 10 days, in which case their combs will be apt to be crooked, and at least $\frac{1}{4}$ drone or store comb, which is good for nothing for rearing workers the next season; but is an actual damage, as the drones reared in them will consume a great part of what the workers gather. Such colonies will be unprofitable ones, either for rearing bees or storing honey, just so long as the comb is kept in that condition.

In conclusion, I will say that I have never used 10 lbs. of foundation in brood frames since I have kept bees, but have built my combs as above, and until I am better satisfied that comb foundation pays than I have been from past experiments. I expect to so build them in the future; hence I am not preaching what I do not practice. All I have to recommend the above, is the success I have attained with it, and if any think that it is not "the right way to work," they can pass this article by, the same as if it had not been written. Still I should like to have all the advocates of foundation try one colony as above, by the side of one hived on comb foundation (both hived at the same time), both of which are to be worked for comb honey. Keep the honey each produces separate, and add to the one building its own comb, enough to cover the cost of the foundation used by the other, and see which comes out ahead.

Borodino, N. Y.

For the American Bee Journal.
Syrian Bees as Breeders.

W. Z. HUTCHINSON.

On page 643, Mr. Fayette Lee takes exceptions to some of my statements in regard to Syrian bees. Please allow me to explain. I do not judge of the Syrians' viciousness solely from my own experience, nor from Mr. Lee's, or Mr. L. L. Lowmaster's, or Prof. Hasbrouck's, or Prof. Cook's, or Mr. Jones', or any other single individual experience, but I look at the evidence

in the aggregate. When there are more than 90 practical bee-keepers gathered together, as there was last October at Chicago, and only one of that number has had gentle Syrians, I consider the fact significant. Mr. D. A. Jones himself admitted, at our late State Convention, that the Italians were more gentle than the Syrians, but said there was a difference in the different strains of Syrians, those from Mt. Lebanon being the most peaceable.

Mr. Jones is a queen breeder and a producer of extracted honey, and prefers a cross between the Italians and Syrians, while I make the production of comb honey a specialty, and prefer a cross between the Italians and Germans; we both have good reasons for our preferences.

In regard to their not properly ripening and sealing their honey, did I not explicitly say, "I am aware that this complaint against them is not universal;" but those who are interested in this matter, should turn to the report of the Northwestern Convention for 1882, and read the testimony of E. J. Oatman, upon the point. This point would not be so serious in working for extracted honey.

Perhaps the statement that they will "rear brood so long as a drop of honey remains in the hive," needs qualifying to mean that they will do so only in warm weather. I certainly did not wish to convey the idea that they would continue breeding after cold weather had commenced, but that they would breed from early spring until late in the fall, whether honey was coming in or not.

I have no desire to tear down nor to build up the reputation of any bees, neither do I enter any controversy upon any subject for the sole purpose of defeating my adversary; my only object is to arrive at the *truth*, and, if in so doing I am "beaten" in my argument, I shall feel grateful to my opponent for pointing out my errors.

Rogersville, Mich., Dec. 15, 1883.

For the American Bee Journal.

"The Pollen Theory"—Facts.

J. M. SHUCK.

Having given the winter condition of bees very close attention for ten years last past, I wish to add to Mr. Kohnke's article in No. 50 of the BEE JOURNAL, the following facts:

1. I have observed that bees do attempt to consume pollen during the winter, when not rearing brood. Mr. Doolittle will here arise to ask how I know they do. I will answer by asking him how he knows his bees eat honey during the winter. I know they eat pollen because it is gone from the cells. I know they eat it, for it is found in their excrement. I have observed that they not only eat pollen when driven to it, but that they attempt to eat the wax. I have repeatedly seen combs thus mutilated.

2. I have seen queenless colonies affected with diarrhoea where honey was short and pollen present; these could not have been rearing brood.

3. I have known queenless colonies, and colonies with queens confined, on granulated sugar syrup, within their hives, out-of-doors for five months, including the worst winter weather; then come out dry, bright, and no sign of diarrhoea, and have seen them do nearly as well on good honey.:

4. I have seen bees wintering on ordinary honey stores after long confinement, void their excrement on the combs within the hive, and pollute them as we all know they do without seeing them.

5. I have seen bees wintering on pure cane sugar stores after long confinement, void their excrement over the combs without pollution, it being thin and as clear as water; I have seen this day after day, and have never observed any evil results from it.

Probably T. F. Bingham suggested this pollen theory some 8 or 9 years ago; I think so, but cannot prove it. I know that James Heddon has slashed right and left about this thing for some years, and lately G. M. Doolittle calls for the facts. Lets have them, and be done with it.

Des Moines, Iowa, Dec. 12, 1883.

SELECTIONS FROM OUR LETTER BOX

Packed on Summer Stands.

Last spring I had 15 colonies of bees. Three of them were queenless. I doubled up 4 of the others, so that I had but 10 good working colonies. The season was wet, cold, and unfavorable for rearing and fertilizing queens for my queenless colonies; so I ordered some queens from Kentucky, but did not get them until about the first of July. I unpacked my bees on April 25. One swarm came out April 30; I hived it on 4 frames of comb foundation, and it gave my 45 pounds of honey in two-pound boxes. My bees produced 607 pounds of honey in one and two-pound boxes, and 147 pounds of extracted honey, making in all 754 pounds of clover honey. August was so dry that I got no honey after July. My bees increased by natural swarming to 27 colonies, which I packed for winter on the summer stands, each having 33 to 40 pounds of good clover honey. W.M. MORSE.

Rockford, Ill., Dec. 15, 1883.

Bees Starve in the Midst of Plenty.

I would like to give an instance of how easily bees may be starved with plenty of honey near them. A friend of mine had neglected to take the honey boxes off his hives, until about Dec. 1. While removing them, he found where the bees in one hive had taken up their winter quarters in the surplus arrangement; he undertook to drive them below with smoke, but as they did not go readily, he took the honey out, and as there was an abundance of stores below, he supposed they would be all right. But what was his astonishment on opening the hive, a few days later, to find the bees all clustered in the box as natural as life,

but cold and stiff in death's embrace. This was a strong colony, and came through the cold winter of 1882-3 on the summer stand, without any protection. I would say the mercury only indicated 10° below freezing, when the bees starved. S. J. YOUNGMAN.

Cato, Mich., Dec. 15, 1883.

Wintered on Sugar-Candy.

On Nov. 20, 1882, I put into the cellar 23 colonies in Carey's improved hives. I took them out on April 20, 1883, all in good condition, except one which was queenless, which I put with two weak colonies; that left me 22 colonies, spring count. The season was cold and wet. I started queen-rearing on June 1, when the bees were at work on raspberry and white clover. I made 60 nuclei, and reared 100 queens. I sold 40 of the nuclei and 75 queens. I extracted 700 lbs. of white clover honey, and had 300 lbs. of comb honey. I have 42 colonies of Italians, and 38 colonies of blacks, which I bought this fall. These I put into the cellar on Nov. 15; they were generally light, on account of early frost. I gave each 10 lbs. of candy made from granulated sugar and honey (25 lbs. of sugar and 5 lbs. of honey), which makes the best candy I have tried for winter stores. I like it better than honey. The bees do not come out gorged, and have the dysentery in the spring. I keep the cellar as near 45° as possible, and have only one ventilator (a 6-inch stove pipe). Since I tried this method of wintering, I have lost but 8 colonies all told, in 5 years.

A. A. BYARD.
West Chesterfield, N.H., Dec. 17, 1883.

To Bee-Keepers of Iowa.

I want to call together all the bee-keepers of the Cedar River Valley and surrounding territory that may be interested in forming an organization in the interest of modern bee-keeping, and the production and marketing of honey, to meet at Waterloo, Iowa, Feb. 13 and 14, 1884. Do not wait until the organization is formed, but come along and help organize it. Help us make the start, for we need an organization of this kind in this vicinity. Among the prominent bee-keepers of this section, who are anxious to form an association, I may mention J. W. Spaulding, of Charles City; John Bird and Chas. Tracy, of Nashua; O. O. Poppleton, of Williamstown; A. J. Norris and E. A. Starks, of Cedar Falls; J. M. and A. Bennett, of Waterloo; L. L. Triem and Dr. Oren, of La Porte; Samuel August, David Thayer and James Ralston, of Vinton; Robert Quinn, of Shellsburg; Thos. B. Quinlan, of Cedar Rapids; E. A. Sheldon and A. R. Blood, of Independence; J. K. Oren and George Black, of Brandon; Wm. Hunt & Son, of Centre Point. All the above named are interested, and a great many more not mentioned, no one of whom have less than 50, and from that up to 300 colonies. We extend an invitation to all outside of this territory, who can, to meet with us. I have mentioned Waterloo, so as to make it central from all directions, and I will send a notice to each of the county

papers along this valley, one or two weeks before the time of the meeting, and try and make arrangements with the hotels for reduced rates during our stay. Remember, bee-keepers, "united we stand, divided we fall."

H. O. McELHANY.
Brandon, Iowa, Dec. 15, 1883.

Wintering on the Summer Stands.

My report for 1883, is—a light crop. I commenced in the spring with 35 colonies—increased 66 per cent. I obtained 2,150 lbs. of extracted honey, and have some 300 lbs. left in the surplus combs for spring stimulating. They winter on summer stands, part in 2-story hives with the top story filled with oat-straw, and part in one story with no protection, except a quilt and 5 thicknesses of paper spread on the frames, with a tight-fitting cover. I formerly wintered my bees in the cellar, and prefer the cellar for a cold winter; but I prefer the summer stands for a warm winter. A. S. EDSON.
Martinsville, Mo., Dec. 11, 1883.

Fair Honey Harvest.

Bees have done well in this part of the State, during the past season, especially the early part, which was very good up to the first of July, when the dry weather cut off the flow for the season, so far as surplus was concerned. The bees gathered enough honey to keep up brood rearing and enough for winter stores, with those that took interest enough in the business to take care of their late swarms and return them to the parent colony. But those that were hived in empty hives did not gather enough, and they will be numbered with the dead when spring comes. My 34 colonies of bees are in winter quarters in good condition, and with honey enough to last until fruit bloom. GEO. COLE.

Freeport, Ind., Dec. 18, 1883.

Got only half a Crop.

As long as I keep bees I never want to be without the BEE JOURNAL. Bees did not do as well here last season as the year before. I think I shall get about half a crop, compared with the season of 1882. I had 38, spring count—increased 4; 42 this fall (I worked against increase); all are well supplied with honey now. I have sold my comb honey at 16 cents mostly, and extracted at 12½ cents. My crop will be about 2,000 lbs., of which I still have ½ on hand. My supplies came so late that I have them all on hand for next year; they were 2 months coming, from the time I ordered them. Weather is very pleasant here—more like spring than winter, so far. Bees were flying nearly every day. I have 3 colonies that I have taken from the neighbors that were going to kill them. I have for several years took such, and have always wintered them as well as any. I took 13 colonies last fall; doubled them down to 6; I gave them frames from my other colonies, of sealed honey, and they are all right for winter, just the same as any colony. I use the Langstroth hive and am well satisfied with it. W. H. GRAVES.

Duncan, Ill., Dec. 14, 1883.

Convention Notices.

The 15th annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 22, 23 and 24 days of January 1884.

This will be the largest and most interesting convention of bee-keepers ever held in America. Many of the most scientific apiarists in the country will take part in the discussions. The programme is completed, and comprises all the interesting topics of the day. The question box will be opened each day, and the questions answered. All are invited to send in questions.

Implements and other articles of interest for exhibition will be received and properly arranged. It will pay any bee-keeper to go a thousand miles to listen to the discussions. By hearing and seeing, you will obtain much more knowledge than by reading. Five hundred bee-keepers will be in attendance. Reduced rates of board at hotels have been secured. All are invited.

GEO. W. HOUSE, Sec.
W. E. CLARK, Pres.

Notice is hereby given that the Nebraska State Bee-Keepers' Association will meet in annual session at Lincoln, Neb., Wednesday, Jan. 9, 1884, at 2 p. m., in the Y. M. C. A. rooms on Tenth street, between O. and P., just east of the Government Square.

We have the promise of some eminent apiarists from other States to be with us, and also expect to have one of the largest displays of aparian supplies ever gathered together in the State. Each person attending, is requested to bring something to exhibit or show, to the edification of bee-keepers and others. Past members are earnestly requested to renew their membership, and all others are cordially invited to come in with us.

The ladies having been well represented at our past meetings, we certainly expect a larger attendance this session than ever before. All those not attending will surely miss a good time, for we expect the largest gathering, and also the most enthusiastic meeting of practical bee-keepers ever held west of the Mississippi river.

We have succeeded in making very satisfactory hotel arrangements. Two dollar hotels have offered \$1 rates. All bee-keepers desiring to attend can obtain certificates entitling them to excursion rates over the B. & M. and U. P. railroads by applying at any time previous to Jan. 6, to M. L. Trester, Secretary of Nebraska Bee-Keepers' Association, Greenwood. Please apply immediately.

M. L. TRESTER, Sec.
T. L. VAN DORN, Pres.

The annual meeting of the Indiana bee-keepers will be held at Indianapolis, Jan. 15 and 16, in the Agricultural rooms corner of Tennessee and market streets. A cordial invitation is extended to all.

F. L. DOUGHERTY, Sec.

The Ohio bee-keepers will hold their annual convention in Columbus, O., Jan. 14, 15 and 16, 1884. All interested in bee-culture are invited. The following subjects will be discussed: "How to winter bees successfully." "Are the new races of bees a success?" "What can we do to prevent adulteration of honey?" "How to create a home market for honey?" "How many colonies can be kept in one locality?" "Can we do without separators?" "Which are best, deep or shallow frames?" "What shall we do with second swarms?" "How many brood frames are necessary in a hive?" "Which is the most salable section, one-half, one or two pounds?" "Is it advisable for all bee-keepers to adopt a standard size of frame?" "What is the most desirable width of sections?"

The above questions will be discussed by eminent men, such as Rev. L. L. Langstroth, Dr. Besse, S. D. Riegel, C. F. Muth, A. I. Root, of Medina, and others, and in addition to the above, Prof. Lizenby, of the Ohio University, will deliver a lecture on "Honey-producing plants;" also Mrs. Jennie Culp will read an essay.

C. M. KINGSBURY, Sec.

The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will hold its annual meeting in Temperance Hall, Freeport, Ill., on Jan. 15 and 16, 1884.

J. STEWART, Sec.
Rock City, Ill., Nov. 30, 1883.

The 5th annual Convention of the Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will be held at Jefferson, Ohio, Jan. 16 and 17, 1884. All are cordially invited.

C. H. COON, Sec.
New Lyme, O., Nov. 26, 1883.

Owing to the death of our Secretary, Mr. T. Brookins, please announce in the BEE JOURNAL that the annual meeting of the Champlain Valley Bee-Keepers' Association, will meet in the parlors of the Addison House, Middleburg, Vt., the second Thursday in January, 1884.

J. E. CRANE, Pres.

The Bee-Keepers' Association of Central Illinois, will meet in Bloomington, on Jan. 9, 1884. All are cordially invited to attend.

JAS. POINDEXTER, Sec.

The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 8, 1884.

M. C. BEAN, Sec.

A meeting of the bee-keepers of Des Moines Co., Iowa, will be held on the second Tuesday in January, at 10 a. m., for the purpose of organizing a county bee-keepers' association, at Middleton, Iowa, in R. C. Crawford's Hall. JOHN NAU, FRANK MELCHER, A. M. BALDWIN, W. R. GLANDON, Committee.

The Southeastern Michigan Bee-Keepers' Convention will be held at Adrian, Mich., in the Plymouth Church Chapel, Jan. 23, 1884; morning, afternoon and evening session.

H. D. CUTTING, Pres.
H. C. MARKHAM, Sec.

The Eastern New York Bee-Keepers Union, will hold an annual Convention in the Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, Jan. 3, 8, 9 and 10, 1884. We invite exhibition of hives, extractors, implements for the apiary, and all aparian supplies. Time will be given for exhibition and examination, and testimonial awarded. There will be speeches and essays on important topics from prominent apiarists, and questions on interesting subjects will be discussed. A general invitation is extended to all interested in apiculture. S. VROOMAN, Pres.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Dec. 24, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

Extracted honey 7@9c. on arrival Best comb honey, 16@17c. in small sections.
BEESWAX—Is of ready sale at 28@30 on arrival.
CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 lb. sections, 17@22c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@10c.; dark, 16@18c.
BEESWAX—Prime yellow, 27@29 c.
H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY—The market remains without change from that of last week. Dealers and retailers buy only enough to supply the demand for present use. It is impossible to place lots, or entire shipments, owing to the reluctance of dealers to buy in advance of immediate wants. Prices obtained for white comb in 1 lb. sections, 18@20c.; 1/2 and 2 lb., 15@18c., according to beauty of same. Extracted honey, 8@10c. per lb., according to color, body and flavor.
BEESWAX—Yellow, 33c.; medium, 28@30c.
R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—Market is active and receipts liberal for comb honey, prices ruling from 10c. for choice 2 lb. sections, and sales of a few small lots of choice 1 lb. sections at 19c. Extracted in fair demand at 8@10c., according to quality.
JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—There is some local demand for extra white comb and such could be placed at good figures, but there is an absence of inquiry for all other descriptions. Fair comb was offered at 10c. A sale of extracted of medium quality was made at 8c. White to extra white comb, 15@20c.; dark to good, 9@11c.; extracted, choice to extra white, 7@71/2c.; dark and candied, 6@61/2c.
BEESWAX—Wholesale, 27@30c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Combs met a fair local demand at 15c. to 18c. per lb. for choice; strained and extracted dull at 6@7c.—in small cans and fancy pkgs. at 10c.
BEESWAX—Firm, at 28@30c.
W. T. ANDERSON & CO., 104 N. 3d Street

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19c.; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.
BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is very quiet on honey. We quote 16@18c. for best 2 lb. sections—18@20c. for best white 1 lb., and 10c. for extracted.
BEESWAX—We have none to quote.
BLAKE & RIPLEY, 57 Chatham Street.



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Letters for publication must be written on a separate piece of paper from items of business.

Our New List of Premiums.

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To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, \$2.00; Monthly, \$1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

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For a club of \$20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with \$200, we will send a Magnificent Organ worth \$150. See description on page 614 of the Weekly for Nov. 28, 1883.

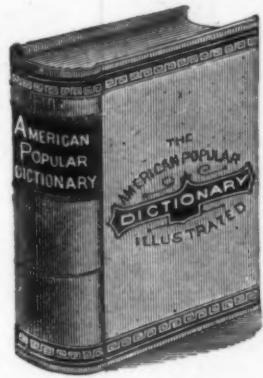
Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

A correspondent asks if any one may select a Binder for the BEE JOURNAL, among the books given as Premiums for getting subscribers we reply, yes; any book or binder we keep for sale, may be selected by those who get up clubs.

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